



## Guidelines for Establishing Wilderness Medicine Protocols for Schools, Colleges, & Outfitters Offering Training and Trips in Outdoor Recreation & Education

For the purpose of this document “Wilderness Protocols” are defined as any protocols outside the traditional EMS curriculum but supported by practice guidelines published by the Wilderness Medical Society (WMS) and the American Heart Association (AHA), and the Scope of Practice (SOP) documents published by the Wilderness Medicine Education Collaborative (WMEC). They will likely include but are not limited to:

- Use of prescription drugs, herbs, and OTC drugs.
- Field management and clearing of spine injuries.
- Wound cleaning.
- Treatment of impaled objects.
- Field management and evacuation guidelines for specific environmental injuries.
- Field management and evacuation guidelines for specific traumatic injuries.
- Field management and evacuation guidelines for specific medical problems.
- CPR protocols.
- Specific treatment of preexisting conditions (e.g.: asthma, diabetes, etc.).

In conjunction with their physician advisor, each institution should consider establishing written wilderness medicine protocols to act as guidelines for the field management of trauma, environmental, and medical problems. The protocols should define when they should be used based on the timeliness of conventional EMS response. Wilderness Medicine Protocols are usually in effect when a group is longer than one hour from definitive care (with the exception of immediately life-threatening situations: e.g.: severe asthma, anaphylaxis, etc.) Institutions should also develop a first aid kit designed to support their guidelines and staff should be trained in the use of the kit contents on a regular basis. The use of weatherproof Patient SOAP Notes for documentation is highly encouraged.

We recommend that institutions and their physician advisors review the WMS practice guidelines and the WMEC scope of practice documents before amending them to the needs of their program(s). Institutions should consider adopting the following general guidelines for staff trained to the Wilderness First Responder Level (WFR):

- Administer 0.3 cc 1/1000 epinephrine by SQ/IM injection (Rx) and subsequent oral H1 ± H2 antihistamine at the first sign of a anaphylaxis in an adult (standard pediatric dose is 0.15 cc or 0.01 mg/kg). Subsequent injections are indicated if: the S/Sx increase after the last injection or do not resolve within 5-15 minutes of the last injection. Oral antihistamines should be kept current for 24 hours. Consider 10-50 mg of oral prednisone—typically administered for a maximum of two doses—if evacuation to definitive care is greater than 8 hours; for those who tolerate it, it is good insurance. (Some patients may be allergic to prednisone, others, especially children and teens, may have adverse side-effects.) Clearly define evacuation guidelines.

- Clear potential spine injuries in the field using one of the following focused spine assessment (FSA) protocols: NEXUS or modified NEXUS, Canadian C-spine Rule, or WMS guideline. Clearly define how patients who fail the FSA are to be handled during their evacuation. Rigid cervical collars and full spinal immobilization are dangerous and should be avoided. Obtunded patients should be evacuated in a commercial or improvised litter with their spinal cord protected from abrupt or gross movement using a vacuum mattress or soft padding.
- Aggressively pressure flush full thickness wounds with “drinkable” water and protect with an appropriate dressing. Wounds at high risk of developing an infection may also be flushed with an antimicrobial solution depending on physician advisor preferences. Deep, highly contaminated wounds may be wet packed with the same solution, splinted, and evacuated; do NOT close high risk wounds in the field. Evacuate all wounds with underlying damage to deep structures (bone, tendons, ligaments, cartilage).
- Remove impaled objects in the field if they interfere with safe transport or are likely to cause additional damage if left in place. Removal should be easy and not cause undue additional damage. Clean the wound as described above.
- Attempt to reduce simple dislocations of the shoulder, patella, and digits (resulting from indirect trauma).
- Discontinue CPR if the patient remains pulseless for 30 minutes. CPR hypothermia protocols should be clearly spelled out.
- Treat severe asthma with 0.3 cc 1/1000 epinephrine by SQ/IM injection (Rx); repeat prn q 15-20 minutes for a total of three doses. Administer 40-60 mg oral prednisone.
- Develop protocols for administering CPR during the pandemic. Note that aerosol transmission is a significant risk with both chest compressions and rescue breathing.

Authorization should be in the form of a written document that clearly identifies:

- 1 The sponsoring organization (e.g.: outfitter, schools, institution, club, etc. name).
- 2 A brief summary of the purpose: standard EMS training is based on immediate access, assessment, and transport via 911 communications. This level of training and subsequent scope of practice does not address the special considerations required in a wilderness/remote environment where delayed transport, prolonged exposure to severe environments, and limited medical equipment are the norm.
- 3 Who is authorized to use the protocols (currently certified WEMT, WFR, WAFA, etc.).
- 4 Each individual protocol—acute allergic reactions, spine clearing, etc.—should briefly identify the problem and specify signs, symptoms, and treatment (including evacuation). Ideally the protocols should be referenced to the providers original course text, handbook, etc.
- 5 The medical director/consulting physician who is authorizing the treatment, their license number, and date.

The completed document should be signed and dated by the institution’s medical director.